REMARKS/ARGUMENTS

The present application discloses a method and computer program product for autonomically reading an encoded cable speed/length value contained within an interconnection cable to set the interconnection speed of two or more components connected by the interconnection cable within a computing environment. The method detects changes to the cable connections within the I/O fabric of the computing environment, and autonomically reconfigures the connected components to enable the interconnected devices to communicate at the maximum effective bandwidth, based on the length of the interconnection cables used.

Reconsideration of the application, as amended, is requested. Claims 1, 4-7, 10 and 13-15 have been amended. No new matter has been added. Claims 1-17 remain pending in this application.

In section 4 of the Office Action, the Examiner rejects claims 1-17 under 35 U.S.C.§ 112, first paragraph, as failing to comply with the written description requirement. More specifically, the Examiner states that the specification of the present invention does not provide support for automatically reading a cable identifier from an interconnection cable connecting components in the computing environment and the specification does not provide support for automatically storing the cable identifier from the interconnection cable in a software object within the computing environment. Independent Claims 1 and 10 have been amended to address the Examiner's concerns and thereby overcome this rejection.

In claims 1 and 10, Applicants have changed the term "automatically" to "autonomically" when referring to the steps of the method and computer-readable program. Applicants respectfully submit that this change provides more specificity with regard to how the steps are executed, and better correlates terminology employed within the specification of the invention and the language of the claims.

The term "autonomic computing" is defined by Webopedia, the online encyclopedia of computer technology (www.webopedia.com), as follows:

> 1. "A type of computing model in which the system is self-healing, self-configured, self-protected and self-managed. Designed to mimic the human body's nervous system – in that the autonomic nervous systems acts and reacts to stimuli independent of the individual's conscious input – an autonomic computing environment functions with a high level of artificial intelligence while remaining invisible to the users. Just as the human body acts and responds without the individual controlling functions (e.g., internal temperature rises and falls, breathing rate fluctuates, glands secrete hormones in response to stimulus), the autonomic computing environment operates organically in response to the input it collects".

In terms of the present invention, the method is autonomic in that it does operate organically in response to the input it collects, and is self-configuring and self-managing (i.e., dynamically adjusts the port speeds of components in the computing system at system bring up or when the computing system determines an interconnection cable has become active, based on the cable identifier associated with the interconnection cable.)

Applicants respectfully submit that the specification of the present invention does provide support for autonomically reading a cable identifier from an interconnection cable connecting components in the computing system, and autonomically storing the cable identifier from the interconnection cable in a software object within the computing environment, citing the specification, page 14, lines 1-24, discussed in more detail below.

In the context of the present invention, the interface speed adjustment mechanism autonomically adjusts port speeds of components connected to the interconnection cable 113 during: 1) computer system bringup (IPL time), and 2) run time when the computer system 50 determines that an interconnection cable 113 has become active (Specification, page 14, lines 10-14). In the case of computer system bringup, the flexible service processor (FSP) 190 reads the cable identifier from the interconnection cable 113 via an I2C bus (i.e., a bus which

physically consists of two active wires and a ground connection. The cable identifier is passed to the resource and partition manager 52 (i.e., hypervisor) via a port slot map. Resource and partition manager 52 reads this information out of the port slot map and stores it in a software object within main memory 101 (Specification, page 14, lines 14-19). During run time, the resource and partition manager 52 detects that a cable has become active and sends an appropriate message to the FSP 190. The FSP 190 then sends a response message with the cable identifier, which is read by the resource and partition manager 52 (i.e., hypervisor), which, in turn, stores the cable identifier in a software object within main memory 101 (Specification, page 14, lines 19-24).

For these reasons, Applicants now respectfully submit that independent claims 1 and 10 now fully comply with the written description requirement, as provided under 35 U.S.C. 112, first paragraph. Applicants further submit that dependent claims 2-9 and 11-17, which depend either directly or indirectly from independent claims 1 and 10, respectively, also comply with the written description requirement.

In paragraph 5 of the Office Action, the Examiner rejects claims 10-17 under 35 U.S.C. first paragraph, as failing to comply with the enablement requirement. Applicants respectfully submit that claims 10-17, as amended, are clearly enabled in the specification on page 14, lines 1-24, as described above. For this reason, Applicants respectfully request that this rejection be withdrawn.

In paragraph 6 of the Office Action, the Examiner rejects claims 4-7 and 13-15 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. In response, Applicants have amended claims 4-7 and 13-15 to fully address the concerns of the Examiner.

In section 9 of the Office Action, the Examiner rejects claims 1-5, 7-13, and 15-17 under 35 U.S.C. §103(a) as being unpatentable over Kopelovitz et al. (US 2002/0138604) in view of Faddell et al. (US 5,938,742). Applicants respectfully traverse this rejection.

Kopelovitz et al. features at least one user attribute, which associates at least one transport medium component with the main path and which is preferably stored in a database (Kopelovitz et al., paragraph 72). Preferably, the user attribute is entered manually by the user (Kopelovitz et al., paragraph 72). A domain network management system (NMS) then receives an instruction to determine the alternate path according to the user attribute. (Kopelovitz et al., paragraph 72).

In contrast to Kopelovitz et al., the present invention does not require a user to manually enter a user attribute (e.g., cable identifier). Instead, the present invention utilizes an interface speed adjustment mechanism (Figure 1, element 54) to autonomically read the cable identifier information from an interconnection cable (Figure 1, element 113). In fact, the interface speed adjustment mechanism (Figure 1, element 54) further stores the cable identifier in a software object within the computing environment, and autonomically adjusts ports speeds of components connected by the interconnection cable based on the cable identifier. In other words, all of these steps are autonomically performed by the present invention, requiring no user intervention, with the necessary attributes (e.g., cable identifier) inherently present within the interconnection cable itself.

Thus, Kopelovitz et al. is missing the necessary step of "automatically reading a cable identifier from an interconnection cable connecting components in the computing environment", as provided in independent claims 1 and 10.

In paragraph 18 of the Office Action, the Examiner states that Kopelovitz teaches "Alternatively and preferably, the value are entered automatically" -- see [0076], where values are user attributes. However, in the same sentence, Kopelovitz states the values are automatically entered from a **management information database**, and that a **description of**

such a function is beyond the scope of the present invention. Applicants respectfully submit that claims 1 and 10 of the present invention provide "reading a cable identifier from an **interconnection cable** connecting components in the computing environment", not from reading a cable identifier from a **database** within the computer system, as provided by Kopelovitz. Further, Kopelovitz plainly states that the step of automatically reading the cable identifier is beyond the scope of the present invention. Since Kopelovitz plainly states that it neither teaches nor enables "automatically reading a cable identifier", the rejection under 35 U.S.C. §103(a) is improper and should be removed.

Applicants also respectfully traverse the rejection of claims 1-5, 8-13, 16, and 17 under 35 U.S.C. §103(a) with regard to Faddell et al. (U.S. Pat. No. 5,938,742). Faddell et al. also is missing the necessary step of "automatically reading a cable identifier from an interconnection cable connecting components in the in the computing environment", as provided in independent claims 1 and 10.

For these reasons, Applicants submit that independent claims 1 and 10 are allowable in view of Kopelovitz et al. (U.S. Pub. No. 2002/0138604) in view of Faddell et al. (U.S. Pat. No. 5,938,742). Since claims 2-5, 8-9, 11-13, 16, and 17 rely, either directly or indirectly, from claims 1 and 10, claims 2-5, 8-9, 11-13, 16, and 17 are also now submitted as allowable.

In paragraph 11 of the Office Action, the Examiner specifically rejects claims 2 and 3, stating that while Kopelovitz et al. does not teach that the method is triggered upon system bring-up and during run time, Faddell et al. teaches that the method is triggered upon system bring-up (power-up; col. 2, lines 30-42) and during run time (hot plugging; col. 2, lines 25-30).

Applicants respectfully submit that the method, as provided in claim 1, is not disclosed nor suggested by either the Kopelovitz et al. reference or the Faddell et al. reference. More specifically, neither reference provides the necessary method step of "automatically reading a cable identifier for an interconnection cable connecting components in the in the computing

environment" as claimed in the present invention. Thus, while Faddell et al. may describe triggering a method upon system bring-up or during run time, the method is not the method as claimed in the present invention. As a result, Applicants submit that claims 2 and 3 are in condition for allowance.

In paragraph 12 of the Office Action, the Examiner specifically rejects claims 4 and 5, stating that Kopelovitz et al. teaches the method, wherein the cable identifier contains the length of the cable (length of the fiber; paragraph 0027) and the type of the associated interconnection cable (paragraph 0024).

Applicants respectfully submit that the length of the fiber described in paragraph 0027 of Kopelovitz et al. and the type of the associated interconnection cable described in paragraph 0024 of Kopelovitz et al. are provided in user attributes. As stated on page 5, paragraph 72 of the Kopelovitz et al. reference, "Preferably, the user attribute is entered manually by the user." Thus, while the present invention stores the attributes of the cable within the cable itself via a cable identifier, and these cable attributes are then automatically read by a software application (e.g., interface speed adjustment mechanism), Kopelovitz et al. does not store the cable attributes within the cable itself, rather it requires that a user manually enter the attributes into the system, or, alternatively, the attributes may be obtained from a database. Thus, neither Kopelovitz et al. nor Faddell et al. provide the necessary method step of "automatically reading a cable identifier for an interconnection cable connecting components in the in the computing environment" as claimed in the present invention. As a result, Applicants submit that claims 4 and 5 are in condition for allowance.

In paragraph 13 of the Office Action, the Examiner rejects claim 7, stating that it would have been obvious to one of ordinary skill in the art at the time the invention was been made to use the voltage supply of the interconnection cable connector and bias resistors on the connected components to identify the cable type – hence the cable identifier. Applicants respectfully submit that the cable identifier of Kopelovitz et al. is provided manually by a user or alternatively exists

in a database on the computer system (see paragraph 76), not within the cable itself, as provided in the present invention. Thus, not only does Kopelovitz et al. not provide the cable identifier, it actually **teaches away** from the existence of a cable identifier in the interconnection cable itself. Faddell et al. also does not automatically read a cable identifier from an interconnection cable connecting components in the in the computing environment, as is done in the present invention, thus Applicants respectfully submit that claim 7 is in condition for allowance.

In paragraph 14 of the Office Action, the Examiner rejects claim 8, stating that Kopelovitz et al. teaches a database in a computer system, hence a logically partitioned computer system. Applicants strongly disagree with this assertion. The mere fact that Kopelovitz et al. teaches a database has nothing whatsoever to do with whether or not a computer system is logically partitioned. These are two separate and distinct concepts, and having one does not necessarily imply the use or the existence of the other.

In paragraph 15 of the Office Action, the Examiner rejects claim 9, stating that Kopelovitz/Faddell teaches the components being I/O peripheral devices. Applicants respectfully traverses this rejection. Applicants further submit that paragraph 2 provides only a broad, background discussion of networking, and makes no specific reference to I/O enclosures as claimed in the present invention. As a result, Applicants submit that claim 9 is in condition for allowance.

In paragraph 16 of the present invention, the Examiner states that claims 10-13 and 15-17 generally correspond to claims 1-4, and 7-9, and are rejected on the same basis. Applicants respectfully submit that claims 10-13 and 15-16 are allowable for the same reasons previously set forth with regard to claims 1-5 and 7-9. Thus, Applicants submit that claims 10-13 and 15-17 are now in condition for allowance.

In view of the foregoing comments and amendments, the Applicants respectfully submit that all of the pending claims (i.e., claims 1-17) are in condition for allowance and that the

application should be passed to issue. The Examiner is urged to call the undersigned at the below-listed telephone number if, in the Examiner's opinion, such a phone conference would expedite or aid in the prosecution of this application.

CERTIFICATE OF ELECTRONIC TRANSMITTAL

I hereby certify that this correspondence is being electronically transmitted to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on

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